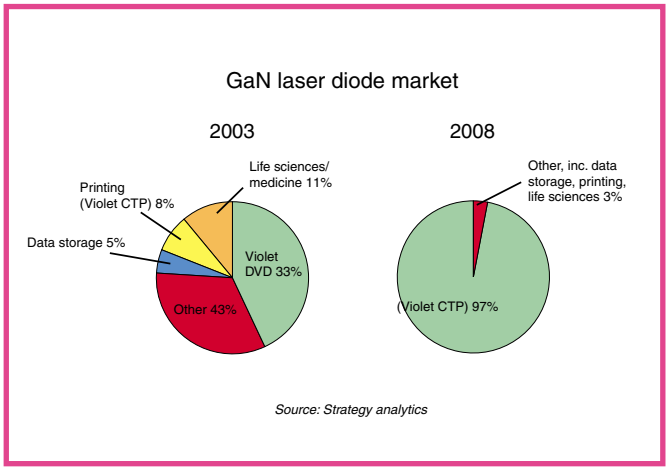
# Violet-DVD platform standardisation essential

The market for gallium nitride (GaN) laser diodes will grow at a CAAGR of 195% through 2008, according to a new Strategy Analytics study in "*Gallium Nitride Laser Diodes: Markets and Applications*", describing established markets for GaN-based laser diodes, including print, spectroscopy, biological agent detection and laser projectors.

Strategy Analytics believes that these markets will not provide substantial growth moving forward.

Instead, growth will be driven by optical storage applications, with the emergence of violet-DVD players accounting for over 97% of unit shipments by 2008.

"Despite the impressive growth, the existence of two competing standards for violet-DVD – namely Blu-ray and HD-DVD – will mean that the GaN laser diode market will still be at an early stage of development in 2008," cautions analyst Asif Anwar.




Source: Strategy analytics

"The influence of movie studios and the IT industry will be crucial in deciding which violet-DVD format becomes the accepted standard, and when next-generation DVD begins to have mass appeal."

The proliferation of violet-DVD will also depend heavily on the development of high-definition TV (HDTV) content and displays.

Further, while violet-DVD players will be recordable, they will face competition from the growing popularity of existing recordable DVD technology.

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# Countdown towards the 2005 slowdown

A recent study "*Wafer Demand 2004-2008: Wafers Growing But Will Profits?*" released by Semico Research says that wafer demand reached 78.2m in 2003, up 12.6% from 2002. Between 2003 and 2008, Semico expects wafer demand will grow at CAGR of 9.2%. According to Semico analyst, Joanne Itow, growth in wafer demand is driven by semiconductor unit growth, but, the introduction of new materials, equipment and yields and die sizes work their way through the learning curve.

Semico believes that the transition to 130nm and smaller process technologies will accelerate as the recovery takes hold and new products are introduced. In 2003, 16% of all wafers were processed using 130nm and smaller process technology. By 2004, 31% of the total IC wafers manufactured will use 130nm process technology or smaller. That equates to almost 23m wafers out of a total of 74m used in the production of all integrated circuits, ie. not including discretes or bipolar.

The combination of reduced capital expenditures, continued introduction of new technologies, and the closing of older fabs is already resulting in spot shortages. With the decline in capital expenditures over the past two years, fewer fabs are currently available for production of new technologies, and the advanced technology capacity is being quickly consumed by the increase in demand, which Semico forecasted would begin in the second half of 2003.

Despite the current tightening of supply, Itow contends that the supply and demand balance will shift again quickly.

"Companies with 300mm fab shells began putting the wheels in motion to facilitise these fabs late in 2003. We also expect there will be a corresponding increase in upgrades of existing lines and more announcements for 300mm facilities," said Itow.

Semico is predicting that almost two dozen 300mm fabs will come online in 2005. This additional capacity, combined with numerous 200mm fabs in China, along with a slight economic downturn, will drive an industry slowdown in 2005.

## Markets & Business

### China propels growth

Worldwide sales of semiconductors rose 26.6% in January from a year ago, propelled by growth in China, the Semiconductor Industry Association has said. The group expects sales this year to grow 19% from last year due to broad demand in all major end-markets, as consumers buy new cell phones and businesses upgrade their information technology systems. Global chip sales for January advanced to $15.5bn from $12.28bn a year earlier, led by a 34% increase in the Asia-Pacific region to $6.07bn. Chip sales in Japan rose 32%, while sales in the Americas climbed by 15%.

Sales fell 3% from December, reflecting typical seasonal differences in demand.

### Micrel buys RF BlueChip

San Jose-based Micrel has bought 94% of the fabless semiconductor company BlueChip Communications AS, of Oslo, Norway. It paid about $2m for the maker of RF integrated circuits and will pay an additional $1m if pre-set revenue and gross profit targets are met by BlueChip during calendar year 2004. Micrel says the deal enhances its ability to serve the low power RF market.

"The acquisition of BlueChip Communications gives Micrel added applications, design and technical marketing resources to increase Micrel's penetration in the fast growing RF marketplace," said Scott Brown, Micrel's director of marketing for RF and mixed signal products.

BlueChip's revenues reached $1.8m in '03, with a net loss of $350,000. Micrel does not expect the acquisition, to impact Q1 or Q2 net income, and will be accretive in the second half of 2004. The in-process R&D charge is to be between $300,000-$600,000.